UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DEC - 1 2014

Mr. Charles D. Barksdale
Philadelphia Energy Solutions
Philadelphia Refinery
3144 Passyunk Avenue
Philadelphia, Pennsylvania 19145

Dear Mr. Barksdale

The United States Environmental Protection Agency (EPA) hereby requires Philadelphia Energy Solutions ("PES" or "the Facility") to provide certain information as part of an EPA investigation to determine the Clean Air Act (CAA or the Act) compliance status of FacilityFacility located at 3144 Passyunk Avenue, Philadelphia, PA 19145

Pursuant to Section 114(a) of the CAA, 42 U.S.C. Section 7414(a), the Administrator of EPA is authorized to require any person who owns and/or operates an emission source to establish and maintain records, make reports and provide such other information as he may reasonably require for the purposes of determining whether such person is in violation of any provision of the Act. In order for EPA to determine whether a violation has occurred, you are hereby required, pursuant to Section 114(a) of the CAA, to provide responses to the following questions and requests for information regarding your facility. Therefore, you are hereby required to respond to questions and requests for information in Enclosure 2. (See Enclosure 1 for instructions and definitions). All information submitted in response to this request must be certified as true, correct, accurate and complete by an individual with sufficient knowledge and authority to make such representations on behalf of PES. On the last page of your response(s) to this Questionnaire, please include the certification contained in Enclosure 3.

Failure to provide the required information may result in the issuance of an Order requiring compliance with the requirements, or the initiation of a civil action pursuant to Section 113(b) of the Act, 42 U.S.C. Section 7413(b). In addition, Section 113(c)(2) of the Act provides that any person who knowingly makes any false material statement, representation, or certification in, or omits material information from any document required pursuant to this Act shall upon conviction be punished by a fine pursuant to Title 18 of the United States Code, or by imprisonment for not more than two years, or both. The information you provide may be used by EPA in administrative, civil and criminal proceedings.

Under 40 C.F.R. Part 2, Subpart B, you may assert a claim of business confidentiality for any portion of the submitted information. You must specify the page, paragraph, and sentence when identifying the information subject to your claim.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or

investigation. To aid in our electronic record keeping efforts, please provide your response to this request for information without staples. Paper clips, binder clips, and 3-ring binders are acceptable.

EPA requires PES to submit the information requested in Enclosure 2 no later than thirty (30) calendar days after receipt of this letter. EPA requires that PES report any changes or revisions to the information supplied within seven (7) days after the change or revision is made. This requirement to provide EPA with changed or revised information shall remain in effect until EPA provides PES with written notice of its termination. Please submit your response to this request to:

Ms. Zelma Maldonado, Associate Director
U.S. Environmental Protection Agency Region III
Office of Air Enforcement & Compliance Assistance (3AP20)
1650 Arch Street
Philadelphia, PA 19103-2029

If you have any questions regarding this information request, please contact Kristen Hall from Office of Air Enforcement & Compliance Assistance staff at 215-814-2168.

Sincerely,

David Arnold, Acting Director
Air Protection Division

ENCLOSURE 1

A. INSTRUCTIONS

1. Please provide a separate narrative response to each question and subpart of a question set forth in this Information Request. **Please provide the requested non-narrative information in spreadsheet format, preferably in Excel.**

2. Indicate on each document produced in response to this Information Request, or in some other reasonable manner, the number of the question to which it corresponds.

3. Provide as much information possible to completely answer each question. This includes all supporting documentation, such as performance test reports, inspection records, memorandums, facility records, etc. Failure to completely respond to any questions may increase the time necessary to determine compliance with all applicable regulations.

4. For each document provided in response to these questions, provide an accurate and legible copy, which can be used to determine the completeness of this request. For any information submitted electronically, clearly label to which question(s) the data is responsive.

5. When a response is provided in the form of a number, specify the units of measure of the number in a precise manner.

6. Where documents or information necessary for a response are neither in your possession nor available to you, indicate in your response why such documents or information is not available or in your possession and identify any source that either possesses or is likely to possess such information.

B. DEFINITIONS

1) All terms used in the Information Request will have their ordinary meaning unless such terms are defined in the Act, 42 U.S.C. § 7401 or 40 CFR Part 60, Part 61 or Part 63.

2) EPA Region III includes the states of Maryland, Pennsylvania, Virginia, West Virginia, Delaware and the District of Columbia.

3) "Flare" is broadly defined as any open combustion unit (i.e., lacking an enclosed combustion chamber) whose combustion air is provided by uncontrolled ambient air around the flame, and that is used as a control or safety device. A flare may be equipped with a radiant heat shield (with or without a refractory lining), but is not equipped with a flame air control damping system to control the air/fuel mixture. In addition, a flare may also use auxiliary fuel. The combustion flame may be elevated or at ground level.

4) "Pilot Gas" means gas injected at a flare tip to maintain a flame.

5) "Purge Gas" or "Sweep Gas" means all gas introduced prior to the Flare tip to protect against oxygen buildup in the Flare header and/or to maintain a constant flow of gas through the flare and out the tip.

6) "Supplemental Gas" means all gas introduced to raise the heating value of Waste Gas.

7) "Vent Gas" means all gases found just prior to the flare tip. This gas includes all Waste Gas, Purge Gas, Supplemental Gas, nitrogen and hydrogen, but does not include Pilot Gas or steam.

8) "Waste Gas" means all gases routed to a flare for combustion, excluding Purge Gas, Supplemental Gas, Pilot Gas, and steam.

ENCLOSURE 2

1. Please identify the current owner and operator of the Philadelphia Refinery and when they took ownership and began operating the Facility. Please identify any environmental permits that have been amended to reflect this change.

2. Please describe the current operations at the Facility, including, but not limited to, process descriptions, type(s) of crude being refined at the Facility, and any major changes since the current owner or operator began operating the Facility. The changes to be described should include at a minimum: 1) the reactivation of the South Yard South Flare, 2) the increase in heat input capacity for a number of heaters, and 3) and the installation of a high speed train unloading facility.

3. Please describe any and all projects at the Facility since the current owner or operator began operating the Facility that may have resulted in any changes in the integration or configuration of any flares, including, but not limited to, piping, monitoring equipment, flare headers and/or flare tips or process changes that may have resulted in any increases in flow to any flares or any new gas streams to the flares.

4. Please provide a list of all capital projects in excess of $25,000 that could affect the flares or the process units emitting to such flares that have occurred at the Facility since the current owner or operator began operating the Facility and identify all permit applications related to those projects.

5. Please identify any process unit at the Facility that emits directly to a flare gas recovery system. Describe in detail the operation of the flare gas recovery system. For each process unit emitting to a flare gas recovery system, explain the specific circumstances that would require off gases to be bypassed from the flare gas recovery system to the flare. If within a process unit only certain portions are diverted to the flare gas recovery system and other portions are vented to the flare, please specify

EPA is aware of the following Flares at the PES facility; (a) North Yard Flare, (b) South Yard North Flare, (c) South Yard South Flare, (d) Acid Gas Flare, (e) Sour Water Striper Flare, (f) 1231/1232 Flare System, and (g) 433 Flare; For the following questions, please answer for these flares and any other flares at the PES facility -

6. For each day beginning on January 1, 2011, until the date of your receipt of this request, list the periods of time (date, start time, and end time) that Waste Gas, Purge Gas, and/or Supplemental Gas was routed to each flare at the PES facility (i.e., "venting periods"). Please identify each vent gas in the response, if possible.

7. For each venting period listed in response to paragraph 6 above, provide the average heating value, in British Thermal Units per standard cubic foot (BTU/scf), of the stream that was vented to each facility flare. The averaging time shall not be greater than one hour. If the heating value is not measured, you shall use the best means available to estimate it. Provide a narrative explanation, example calculations and appropriate supporting documentation describing how you arrived at your response.

8. For each venting period listed in response to paragraph 6 above, provide the average exiting velocity, in meters per second (m/sec) or foot per second (ft/sec), of the stream that was vented to each facility flare. The averaging time shall not be greater than one hour. If the exiting velocity is not measured, you shall use the best means available to estimate it. Provide a narrative explanation, example calculations and appropriate supporting documentation describing how you arrived at your response.

9. For each venting period listed in response to paragraph 6 above, provide the average mass flow rate of the Vent Gas, in pounds per hour (lbs/hr) that was vented to each facility flare. The averaging time shall be no more than one hour. If the mass flow rate is not measured, you shall use the best means available to estimate it. Provide a narrative explanation, example calculations and appropriate supporting documentation describing how you arrived at your response.

10. For each venting period listed in response to paragraph 6 above, provide the average rate at which steam and/or air was being added to each facility flare, in lb/hr for steam and/or scf/hr for air, at all locations on the flare (i.e., the sum of seal, upper, lower, winterizing, etc.) during each venting period. The averaging time shall not be greater than one hour. If the steam and/or air flow is not measured, you shall use the best means available to estimate it. Provide a narrative explanation, example calculations and appropriate supporting documentation describing how you arrived at your response.

11. For each venting period listed in response to paragraph 6 above, provide the average steam-to-Vent Gas or air-to-Vent Gas ratio (lb steam/lb Vent Gas or scf of air/lb of Vent Gas) during any release to each facility flare. The averaging time shall be no more than one hour. Provide a narrative explanation, example calculations and appropriate supporting documentation describing how you arrived at your response.

12. Provide a one-hour average of the concentration of each constituent in the Vent Gas during venting periods for the dates beginning one month prior to your receipt of this request, until the date of receipt of your request.

13. Provide a list of the primary constituents in the Vent Gas routed to each flare for venting periods since January 1, 2011 through the present, and an estimated range of each constituent's concentration. Except for the period specified in paragraph 12, you need not determine the exact concentration of all compounds for each period of time, but only the most prominent compounds and an approximate range of concentration.

14. For each facility flare, provide the minimum steam or air addition rate, in lb/hr for steam and/or scf/hr for air, at all locations on the flare (seal, upper and lower). To the extent that the minimum steam or air addition rate changes on a seasonal basis, state the minimum rate for each season and the time periods during which each season's minimum rate applies. Provide appropriate supporting documentation.

15. Provide copies of any and all documents in your possession, custody, or control that prescribe or recommend the amount of steam or air to be added to each facility flare. Provide a copy of the entire document if, within the document, it states the maximum steam or air rate, minimum steam or air rate, steam or air addition rate associated with a vent scenario, general steam-to-vent gas or air-to-organic gas/vent gas ratio, or any other reference to steam addition.

16. For each facility flare, state with specificity which, if any, federal and/or state regulations regulate/apply to each flare. If any facility flare is listed in a permit issued under federal and/or state regulations, provide an electronic copy, preferably in "PDF", of each currently effective permit.

17. For each facility flare, state whether the flare is configured to receive gases/vapors from one or more pressure relief device(s), which is a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process equipment.

18. For each facility flare, state whether the flare and its associated closed vent system is used as the method of compliance with any federal regulation, including without limitation, the Standards of Performance for New Stationary Sources found at 40 C.F.R. Part 60, the National Emission Standards for Hazardous Air Pollutants found at 40 C.F.R. Part 61, and the National Emission Standards for Hazardous Air Pollutants for Source Categories found at 40 C.F.R. Part 63, specifically including without limitation any leak detection and repair (LDAR) provisions promulgated under these Parts such as 40 C.F.R. § 60.482-4(c), or 40 C.F.R. § 63.165(c). In each such case, identify the process unit or equipment that is/are the "affected facility" under the applicable Part and the specific Subpart that applies to the "affected facility."

19. For each facility flare, provide a copy of all test reports for tests conducted to demonstrate the net heating value and exit velocity performed for any reason.

20. Beginning January 1, 2011 through the present, provide documentation demonstrating the presence of a flare pilot flame for each facility flare.

21. Beginning January 1, 2011 through the present, provide all visible emission records for each facility flare.

22. Beginning January 1, 2011, provide a list and description of any violations PES has incurred from the Philadelphia Air Management Services regarding operation of their flares.

23. For each Facility flare, please identify if the flare has any of the equipment listed below and describe the locations of any such pieces of equipment as related to the flare and the incoming steam and gas lines. Please provide a process flow schematic of the flare and its associated instrumentation. As an aid, we are providing as an attachment a summary chart of the Facility's flares and their associated instrumentation that was developed through information responses from the prior owner. Please correct and update as required.
    a. A steam flow meter,
    b. A waste flow meter,
    c. A Molecular Weight meter,
    d. A thermocouple,
    e. A auto igniter,
    f. A pilot and/or flame alarm, and
    g. A video and/or IR camera for flame monitoring

Summary Chart for use with Question 23:

Sunoco R & M
Philadelphia Refinery

Instrumentation

Flare	Description	Location	Steam Injection		Flare Gas Meter		Flame Monitoring				
			Flow meter	Operation	Waste	Purge	Thermo couple	Auto Igniter	Alarm	Video Camera	IR Camera
North Yard Flare	LPG Flare - propane loading rack and terminal	Point Breeze	N	Provide minimum flow. If needed, operators circumvent by manually opening to eliminate smoking.	Y	N	Y	Y	Y	Y	N
South Yard - North Flare	Handles majority or processes at Point Breeze. Only flare with Flare Gas Recovery (FGR) system	Point Breeze	N	Operators manually control the center and ring steam injection to avoid smoking	N	Y	Y	N	Y	Y	Y
South Yard - South Flare	Out of Service for ~ 10 years	Point Breeze									
Acid Gas Flare	Emergency flare	Point Breeze	N	Manually operated to avoid smoking	N	N	Y	N	Y	N	N
Sour Water Stripper Flare	Emergency flare	Point Breeze	N	Manually operated to avoid smoking	N	N	Y	N	Y	N	N
1231/'1232 Flare System	Main plant flare used for plant upsets at Girard Point. 2 flares only 1 operates at a time. 1231 flare is used 90% of the time	Girard Point	Y	Valves are manually operated to avoid smoking.	Y	Y	N	Y	Y	Y	Y
433 Flare	Dedicated flare to hydrofluoric acid alkylation unit	Girard Point	N	Provides minimum flow. If needed, operators circumvent by manually opening to elimnate smoking.	N	N	Y	Y	Y	Y	Y